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BSD EXHIBIT 62-71

OPERATIONAL FACILITIES REQUIREMENTS

FOR

MINUTEMAN WS-133B

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This document establishes operational facilities requirements for WS-133B.

1.2 Scope

Requirements for WS-133B facilities comprising an operational Wing include: R R

(a) Launch Control Facility (LCF).

(b) Launch Facility (LF).

(c) Strategic Missile Support Base (SMSB).

(d) Connecting Roads and Utility Services.

These requirements are predicated upon the use of an existing Air Force Base for administration and logistical support. It is assumed that industrial facilities and quarters for administrative and support personnel will be available on the existing base. R R R R R

Specifically excluded are all research and development facilities, missile assembly and recycle facilities, flight test facilities, factory, or other facilities not included within the physical boundaries of an operational Wing of WS-133B.

1.0 INTRODUCTION

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1.3 Description

WS-133B is comprised of the SM80C missile, Aerospace Ground Equipment (AGE), operational facilities, personnel subsystems, and logistic support systems.

The requirements stated herein are based upon a WS-133B configuration as defined in paragraph 2.4 of BSD Exhibit 62-123 (SECRET), and BSD Exhibit 62-62.

2.0 APPLICABLE DOCUMENTS

The status of the Government specifications and exhibits called out in this exhibit is established elsewhere in the applicable contract and mention herein of such specifications and exhibits is for reference only. Exhibits referenced in this exhibit are listed below.

2.1 BSD Exhibits

AFBM 58-20A	Gas, Fluid and Electrical Conduit Line Identification for Use in Missile and Space Systems
AFBM 60-1	Personnel Subsystem Test and Evaluation
BSD 60-30	Contractor Responsibilities for Activation of Minuteman Sites (Hardened and Dispersed)
BSD 62-4	Ground Electronic System Criteria - WS-133B
BSD 62-46	Minuteman Interface and Space Control Program
BSD 62-51	Environment Design Criteria - WS-133B
BSD 62-52	Targeting Parameters Design Criteria - WS-133B
BSD 62-53	Maintainability
BSD 62-54	Code Storage, Handling and Changing - WS-133B
BSD 62-58	Guidance and Control Subsystem Design Criteria - WS-133B

2.1 BSD Exhibits - Continued

BSD 62-61	Retro-rocket Subsystem Design Criteria
BSD 62-62	System Requirements Analysis Program for WS-133B Minuteman
BSD 62-64	Ordnance System Design Criteria
BSD 62-66	Vehicle Structural Design Criteria
BSD 62-72	Logistics Support System
BSD 62-75	Grounding Design Criteria - WS-133B
BSD 62-77	Electric Power and Cabling Subsystem Criteria for WS-133B Minuteman Weapon Systems R
BSD 62-78	Security Subsystems Design Criteria - WS-133B R
BSD 62-79	Life Support Subsystem - WS-133B
BSD 62-80	Environmental Control Subsystem Design Criteria - WS-133B
BSD 62-82	Weapon System Safety Criteria - WS-133B
BSD 62-83	Weapons Effects Criteria - WS-133B
BSD 62-84	Standardization

2.1 BSD Exhibits - Continued

BSD 62-85	Weapon System Interface Compatibility
BSD 62-87	Electro-interference Compatibility
BSD 62-88	Finish
BSD 62-89	Packaging
BSD 62-90	Personnel Subsystem Criteria - WS-133B
BSD 62-91	Umbilical Retractions Subsystem Criteria - WS-133B
BSD 62-92	Ground Transportation Subsystem Design Criteria - WS-133B
BSD 62-93	Air Transportation Subsystem Design Criteria - WS-133B
BSD 62-94	Handling Subsystem Design Criteria - WS-133B
BSD 62-123	WS-133B Weapon System Design Criteria, Minuteman
BSD 62-149	Siting Criteria for Minuteman WS-133B Operational Facilities
BSD Document	Missile Facilities Design, April 1962

2.2 Air Force Documents

AFM 86-4	Standard Installations Facility Requirements
AFM 88-10	Water Supply

2.2 Air Force Documents - Continued

AFM 88-11	Sewerage, Refuse, and Industrial Waste
AFM 88-15	Standard Outline Specifications for Air Force Facilities
AFP 88-116-2	Air Field Pavement-Selection of Types, Designs and Alternate Bid Schedule
AFM 32-6	Explosives Safety Manual
AF Definitive 33-02-96	Warehouse
MIL-C-45662A	Calibration and Certification of Measuring and Testing Equipment
MIL-R-27542	Reliability Program Requirements for Aerospace Systems, Subsystems and Equipment

2.3 Boeing Documents

D2-6385	WS-133A Minuteman Facilities Criteria for Strategic Missile Support Base (SMSB)
D2-30044-1A	Minuteman WS-133B Requirements and Description Wing VI
Vol. 1A	Introduction, Table of Contents, Usage Index
Vol. 1B	Flow Diagrams, Operational, VAFB
Vol. 2A	Form B's, Operational
Vol. 3A	Fig. A's, Operational AVE, OGE, RPIE
Vol. 3B	Fig. A's, Operational MGE, DT and TE

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2.4 STL Documents

(To be issued)	WS-133B Missile Description
6120-7420-00-000	Scope and Explanations of Minuteman Personnel and Training Program

2.5 AVCO Documents

RAD-SR-61-90 Revision 1	Technical Criteria for Design of Minuteman Operational Munitions Facility

3.0 ADMINISTRATIVE REQUIREMENTS

This Section summarizes conditions, events and responsibilities associated with the development and use of Facility Design Criteria.

3.1 Contractor Applicability

The requirements of this Exhibit apply to the following contractors:

(a) Integration, Assembly and Test (IA&T) contractor ——— The Boeing Company

(b) Ground Electronics System (GES) contractor ——— Sylvania Electronic Products, Inc.

(c) Mark IIA Series Re-Entry Systems (R/V) contractor ——— AVCO Corporation R

(d) Other Re-Entry Systems (R/V) contractor ——— (To be determined) R

(e) Stage I Propulsion contractor ——— Thiokol Chemical Corp.

(f) Stage II Propulsion contractor ——— Aerojet - General Corporation

(g) Stage III Propulsion contractor ——— Hercules Powder Co.

(h) Guidance and Control (G&C) contractor ——— Autonetics

(i) Environmental Control System contractor ——— (To be determined)

(j) Security System contractor ——— Sylvania Electronic Products, Inc. (West) R

3.1 (continued)

(k) SAC Communications contractor ----------International Electric Co. (Others will follow)

3.1.1 Facilities Responsibility

Primary responsibility for the preparation of Facility Design Criteria is assigned below. Contractors not listed below will provide information as required.

3.1.1.1 Launch Facilities

(a) Integration, Assembly and Test Contractor (Boeing)

(b) Ground Electronics System Contractor (Sylvania)

(c) Guidance and Control Contractor (Autonetics)

(d) Environmental Control System Contractor (To be determined)

(e) Security System Contractor (Sylvania - West) R

3.1.1.2 Launch Control Facilities

(a) Integration, Assembly and Test Contractor (Boeing)

(b) Ground Electronics System Contractor (Sylvania)

(c) Guidance and Control Contractor (Autonetics)

(d) Environmental Control System Contractor (To be determined)

(e) SAC Communications Contractors (To be determined)

3.1.1.3 SAMSB Facilities

(a) Integration, Assembly and Test Contractor (Boeing)

(b) Ground Electronics System Contractor (Sylvania)

(c) Mark IIA Series Re-Entry Systems Contractor (AVCO) R

(d) Other Re-Entry Systems Contractor (To be determined) R

(e) Guidance and Control Contractor (Autonetics)

3.2 Concurrency

The concurrent development of subsystems demands that the final design and construction of operational LF's and LCF's must proceed before completion of the following:

(a) The System Requirements Analysis Program per BSD Exhibit 62-62

(b) The flight test program

(c) The design of operational AGE

In some instances, establishment of facilities configuration will lead AGE functional analysis and design. These facilities characteristics will then influence directly the Systems Requirements Analysis and AGE Design Requirements.

3.3 Sequence of Events

In general, key chronological events will occur from inception to completion of the total facility effort. In actual practice, the concurrent weapon system development will create some overlapping of these events. These events are as follows for the LF and LCF:

3.3 (contd)

(a) Approval of Facility requirements.

(b) Approval of basic facility configuration and concepts.

(c) Approval of facility design criteria documents.

(d) Approval of facility siting criteria.

(e) Site Selection.

(f) Approval of facility construction plans and specifications.

(g) Advertising and award of facility construction contract.

(h) Facility construction.

(i) Facility changes during construction and assembly/checkout of AGE.

For the SMSB facilities, the sequence of events follows:

(a) Approval of facilities requirements.

(b) Approval of basic design and siting criteria common to all Wings. R

(c) Site Selection.

(d) Approval of supplemental design criteria for each Wing. R

(e) Approval of facility construction plans and specifications.

(f) Advertising and award of facility construction contract.

(g) Facility construction.

(h) Facility changes during construction and assembly/checkout of AGE.

3.4 Responsibilities

Presented below are the principal responsibilities and tasks associated with the events of paragraph 3.3 above.

3.4.1 Facility Requirements

The facility requirements are established by this Exhibit which has been prepared jointly by STL and The Boeing Company.

3.4.2 Basic Facility Configuration and Concepts

As required, these concepts are developed by the Minuteman Facilities Ad Hoc Committee, utilizing the services of The Boeing Company, STL and an Architect-Engineer. These concepts become requirements upon approval by the Minuteman SPO.

3.4.2.1 Authorized representatives of the following agencies constitute the membership of the Minuteman Facilities Ad Hoc Committee:

BSD/BSQO .....Chairman

BSD/BSQOF

BSD/BSSFQ

SAC

STL

The Boeing Company

3.4.3 Facility Design Criteria Documents

Facility design criteria must satisfy the requirements of this Exhibit. The Boeing Company will prepare integrated facilities design criteria, except for the SMSB Munitions Facilities, and will utilize required data obtained from the appropriate contractors listed in paragraph 3.1 above. For the Munitions Facility, the design criteria will be prepared by the R/V System Contractor(s). STL will provide systems engineering and technical direction of the preparation of all facility design criteria. All facility design criteria documents and revisions will become official only when approved by BSD.

3.4.4 Facility Siting Criteria

Except for SMSB facilities, siting criteria are contained in BSD Exhibit 62-149. The basic SMSB design criteria document will include siting criteria.

3.4.5 Site Selection

Except for SMSB facilities, all site locations will be accomplished by SAC with the technical support of BSD. Siting of SMSB's including the Munitions Facilities, will be accomplished jointly by SAC/BSD/STL/Boeing and the R/V contractors. All siting will be based upon approved criteria.

3.4.6 Facility Construction Plans and Specifications

Facility design and the resulting construction plans and specifications will be; (a) based upon approved facility design criteria, and (b) prepared by an Architect-Engineer under the direction of BSD/BSSFQ. STL, The Boeing Company and other Minuteman contractors, as appropriate, will review the construction plans and specifications for conformance to the approved facility design criteria. Final approvals will be made by BSD/BSSFQ.

3.4.7 Facility Construction

Facility construction will be the responsibility of the Site Activation Task Force (SATAF). Associate Contractor responsibilities are as defined in BSD Exhibit 60-30.

3.4.8 Facility Changes

Following award of each facility construction contract, facility changes will be originated and processed in accordance with applicable CCB instructions.

3.5 Schedules

Scheduled requirements for the above events will be as established in the BSD Management Data System, Minuteman Master Activation Phasing Schedules, Volume III.

4.0 LAUNCH FACILITY REQUIREMENTS

4.1 Description

An operational Launch Facility (LF) consists of the following:

4.1.1 An unmanned, hardened underground launcher (consisting of a launch tube and annular equipment room) containing a single SM-80C missile in the launch tube. A shock floor shall be provided in the Launcher Equipment Room (LER) to protect launch essential equipment. R

4.1.2 Essential launch equipment necessary for maintaining operational readiness and to effect a launch.

4.1.3 A hardened underground structure, unmanned, separate from the launcher, used to house environmental control equipment and a standby power generator. (Launch Equipment Building, LEB) R

4.1.4 Hardened communications antennas.

4.1.5 A surface access and maintenance area, security fencing, area surveillance antennas, a command system antenna, lighting, commercial power source, surface reference monuments, vehicle maneuvering area for GSC collimator alignment, and power outlets for maintenance vehicles. R

4.2 AGE

Newly designated items of AGE for WS-1338 LF are listed below:

(1) Shock Isolators, LER ----------AGE

(2) Shock Isolators, LEB ----------AGE R

(3) Blast Valve, LEB ----------AGE

(4) Hydraulic System (for Blast Valve) ----------AGE

4.3 Site Location and Spacing

Each launch facility shall be located in accordance with the requirements of BSD Exhibit 62-149.

4.4 Orientation and Targeting

Location of the theodolite sight tube and targeting requirements shall be as defined in BSD Exhibit 62-52.

4.5 Launch Capability

Each Launcher is required to have a single launch capability. Except for "missile-away" status monitoring link, the equipment is not required to survive launch.

4.6 Reaction Time

The launch facility shall be capable of launching a missile within the allowable time as defined in BSD Exhibit 62-123 (SECRET).

4.7 Survival Time R

The launcher is required to maintain a "capability-to-launch" after surviving the weapons effects defined in BSD Exhibits 62-83 and 62-123 (SECRET).

4.8 Readiness

The launch facility and essential launch equipment shall be in a readiness condition for a period of three years, except for maintenance periods, which shall not exceed six hours.

4.9 Vulnerability

The launch facility with contained equipment shall be designed so as to be reasonably invulnerable to sabotage or attack as outlined in BSD Exhibits 62-78 (SECRET) and 62-123 (SECRET). R

4.10 Environmental Requirements

The launch facilities shall be capable of withstanding the environments as defined by BSD Exhibits 62-51, 62-59, 62-83, and 62-123 (SECRET).

4.11 Maintenance

Maintenance periods shall not exceed six hours duration.

4.12 Communications

Status monitoring and command communication links shall be provided by a hardened cable network system and by radio transmission. Both systems shall be capable of surviving weapons effects per BSD Exhibit 62-83. Radio link antennas shall be provided per BSD Exhibit 62-4 (SECRET).

4.13 Utility Services

4.13.1 Connecting roads shall be provided between the paved surface accesses and maintenance areas of the launch facility and the SMSB areas.

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4.13.2 Commercial telephone connections shall be provided to the support base.

4.14 Electrical Power and Distribution Requirements

Power for the launch facilities shall be supplied from a commercial power network. In addition, the launch facilities shall be equipped with a standby generator and batteries. Operation of these power systems shall be as specified in AF/BSD 62-123 (SECRET).

4.15 Grounding, Shielding and Electro-Interference

Requirements for grounding, shielding and electro-interferences are defined in BSD Exhibits 62-83 and 62-87.

4.16 Security

Security of the launch facility shall be accomplished through area surveillance sensors located above grade and within the launcher and Equipment Room, as defined in BSD Exhibit 62-78 (SECRET). R

4.17 Reference Criteria

Technical references to be used in the preparation of LF design criteria are contained in Table 4.0-1.

4.18 Deviations for WS-1338 VAFB Facilities R

Operational facilities design deviations for the Vandenberg Air Force Base launch facilities shall be limited to those requirements dictated by range safety, orientation of the line of flight, the recording of missile and equipment performance, and the necessity for a refire capability after a refurbishment period.

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TABLE 4.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH FACILITY

TECHNICAL SUBJECT HEADINGS FOR LF DESIGN CRITERIA (Document D2-30081)		BSD EXHIBIT	OTHER SPECIFICATIONS
3.0*	General Facility Requirements		S-133-30-10 (STL)
3.1	Description of Facilities	62-123	DO
3.2	Siting	62-149	
3.3	Orientation and Targeting	62-52	
3.4	Capability		
3.5	Reaction Time	62-123	S-133-30-10
3.6	Survival and Emergency Time	62-123	
3.7	Readiness		S-133-30-10
3.8	Vulnerability	62-123	DO
3.9	Operating Environmental Tolerance Levels	62-83, 62-123	DO
3.10	Weapons Effects Design Parameters	62-83, 62-123	
3.11	Personnel		DO
3.12	Maintenance and Logistics	AFBMD 58-20A	S-133-30-10
3.13	Communications	62-83 62-4	S-133-30-10
3.14	Electrical Power	62-77	DO
3.15	Grounding, Shielding and Electro-Interference	62-75 62-87	S-133-30-10 C755-6120-9157-KS-000
3.16	Reliability		MIL-R-27542
3.17	Operating Life		S-133-30-10

* Refers to Facilities Criteria Document paragraph numbers.

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TABLE 4.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH FACILITY - Continued

TECHNICAL SUBJECT HEADINGS FOR LF DESIGN CRITERIA (Document D2-30081)		BSD EXHIBIT	OTHER SPECIFICATIONS	R
3.18	Security	62-78	S-133-30-10	R
3.19	Construction Tolerances			
3.20	Validation and Acceptance Tests			R
3.21	Protective Finishes			R
4.0	Integrated Criteria		S-133-30-10	
4.1	Civil		S-133-30-10 AFM 86-4	
4.2	Mechanical	62-80	S-133-30-10	R
4.3	Electrical	62-77, 62-75	DO	R
4.4	Communications		DO	R
4.5	Safety		DO	
4.6	Security	62-78	DO	R
4.7	Triangulation Points	62-149		
4.8	Equipment Lists		DO	R
5.0	Service Area Criteria		S-133-30-10	
5.1	Function		S-133-30-10	
5.2	Location	62-149	S-133-30-10	R
5.3	Structural		S-133-30-10	
5.4	Electrical	62-77, 62-75	S-133-30-10	R
6.0	Launcher Equipment Building Criteria		S-133-30-10	
6.1	Function		DO	
6.2	Architectural		DO	

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TABLE 4.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH FACILITY - Continued

	TECHNICAL SUBJECT HEADINGS FOR LF DESIGN CRITERIA (Document D2-30081)	BSD EXHIBIT	OTHER SPECIFICATIONS	R
6.3	Structural			
6.4	Mechanical	62-80	S-133-30-10	R
6.5	Electrical	62-77, 62-75	DO	R
6.6	Communications			
6.7	Security	62-78		R
7.0	Closure Criteria		S-133-30-10	
7.1	Function		DO	
7.2	Architectural		DO	
7.3	Structural		DO	
7.4	Mechanical		DO	
7.5	Electrical	62-77, 62-75	DO	R
7.6	Security	62-78	DO	R
8.0	Launcher Equipment Room Criteria		S-133-30-10	
8.1	Function		DO	
8.2	Architectural		DO	
8.3	Structural		DO	
8.4	Mechanical		DO	
8.5	Electrical	62-77, 62-75	S-133-30-10	R
8.6	Security	62-78	DO	R
8.7	Grounding	62-75	DO	R
8.8	Communications		DO	

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TABLE 4.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH FACILITY - Continued

TECHNICAL SUBJECT HEADING FOR LF DESIGN CRITERIA (Document D2-30081)		BSD EXHIBIT	OTHER SPECIFICATIONS
9.0	Launch Tube Criteria		S-133-30-10
9.1	Function		DO
9.2	Architectural		DO
9.3	Structural	62-83	S-133-30-10 D2-14136 Vol. III
9.4	Mechanical		S-133-30-10
9.5	Electrical	62-77, 62-75	DO
9.6	Communications		DO
9.7	Security	62-78	DO
10.0	Antenna Criteria		
10.1	Function		
10.2	Architectural		
10.3	Structural		
10.4	Electrical	62-77, 62-75	

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5.0 LAUNCH CONTROL FACILITY TECHNICAL REQUIREMENTS

5.1 General

Technical requirements for the facility design criteria are presented below for Wing VI. The Launch Control Facility (LCF) configuration shall conform, insofar as practicable, to the WS-133A operational LCF.

5.2 Description

Each LCF will consist of the following:

5.2.1 Launch Control Center (LCC)

The LCC is a hardened underground facility containing equipment and personnel. The facility, by electronic interconnections with launch sites, shall be capable of:

(a) Monitoring launch site readiness and security status.

(b) Initiating test and calibration sequences.

(c) Initiating launch of missiles by signals from cable and/or radio systems.

(d) Maintaining contact with higher authority through one or more of the SAC communications systems.

5.2.2 Launch Control Equipment Building (LCEB)

The LCEB is a hardened underground facility containing a standby power source and environmental control systems.

5.2.3 Launch Control Support Building (LCSB) R

The LCSB is a soft facility containing a security control room, personnel living quarters and messing facilities, equipment rooms, and a security garage. An auxilliary generator is required to sustain essential loads in the event of commercial power failure.

5.2.4 Access Facility

The Access Facility (a shaft and connecting tunnel) is a soft structure interconnecting the LCC and LCEB to the LCSB and will provide a means of access for equipment and personnel. Entry to the LCC and LCEB will be via hardened blast doors.

5.2.5 Antennas R

The functions to be performed by antennas are as follows:

1. SAC communications will require UHF (hard) HF and LF (soft) antennas.
2. Area surveillance will require security antennas (soft).
3. Command and status information between LCFs and LFs will require MF antennas (hard).

5.2.6 Surface Area

The surface area is all the area encompassing the LCF and bounded by security fencing. The area will include the space required for hardened antenna systems, connecting roads and utility services, and classified parking area.

5.2.7 Water Well R

A water well shall be provided to fulfill normal facility requirements for operation of the LCF.

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5.3 Requirements

Weapon-system requirements to be satisfied by the LCF are tabulated by paragraph reference in Table 5.0-1 for the technical headings of the applicable design criteria document. Key requirements that govern the facility configurations and interfaces are stated in the following paragraphs.

5.3.1 Configuration

The design criteria shall be compatible with the basic configuration and concepts developed and approved in accordance with Weapon-system functional description and system model documents. These documents will be developed from Exhibit 62-62, "System Requirements Analysis Program for WS-133B" and AF/BSD Exhibit 62-149.

5.3.2 Human Engineering and Life Support Systems

Design of facilities shall consider the principles of human engineering as defined in MIL-STD-803. The LCC will be manned twenty-four (24) hours a day by a two-man (2) missile combat crew. Life Support Systems will be provided to support a maximum of three (3) personnel during the preattack, post-attack and post-launch periods. The LCC shall include life support equipment as defined in AF/BSD Exhibit 62-79, and shall include provisions for personnel escape in the event that the Access Facility is blocked.

5.3.3 Environment

The LCF shall be capable of withstanding environments as defined below:

5.3.3.1 Climatic

Natural climatic extremes are contained in AF/BSD Exhibit 62-51.

5.3.3.2 Induced (Mechanical)

Induced (contained) environment shall be as defined in AF/BSD Exhibit 62-51.

5.3.3.3 Weapons Effect R

The LCF shall survive the weapons effects as specified in AF/BSD 62-83 (SECRET) to the level specified in AF/BSD 62-123 (SECRET). Weapons effects shall include mechanical shock, radiation effects, acoustical environment, electromagnetic pulse effects, surface winds, debris, etc.

5.3.4 Reliability

The facilities and/or equipment reliability shall be as defined in MIL-R-27542.

5.3.5 Security

Security control will be governed by AF/BSD Exhibit 62-155.

5.3.6 Electrical Power and Distribution Requirements R

Power for the LCF is to be supplied from three sources:

(a) Commercial power

(b) Standby engine driven generator

(c) Emergency batteries

Requirements for power distribution, voltage, frequency, phasing, tolerances, and switching requirements shall be described.

5.3.7 Grounding, Shielding, and Electro-Interference

Electro-interference requirements for grounding and shielding shall be as specified in AF/BSD 62-87.

5.3.8 Communications

Communication modes shall be provided by hardened cable network systems, radio transmission systems, and commercial telephone.

Both hardened cable and radio antennas shall be capable of surviving the weapons effects specified in AF/BSD Exhibit 62-83 (SECRET). Radio antennas shall be provided in accordance with the requirements in AF/BSD Exhibit 62-4.

5.4 AGE

Newly designated items of AGE for WS-133B LCF are as listed below:

(1) Shock Isolator, LCEB ---------- AGE

(2) Blast Valve, LCEB ---------- AGE

(3) Hydraulic System (for Blast Valves, LCEB) ---------- AGE

TABLE 5.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH CONTROL FACILITY

TECHNICAL SUBJECT HEADINGS FOR LCF DESIGN CRITERIA (Document D2-30082)		BSD EXHIBIT	OTHER SPECIFICATIONS
PART I - GENERAL INFORMATION			
3.0	General Facility Requirements		S-133-30-20 (STL)
3.1	Description of Facilities	62-123	DO
3.2	Site Selection	62-149	
3.3	Facilities Arrangement		
3.4	Capability		
3.5	Exposure Time	62-123	S-133-30-20
3.6	Survival Time	62-123	
3.7	Readiness		S-133-30-20
3.8	Vulnerability	62-123	DO
3.9	Environment Tolerance Levels	62-83	DO
3.10	Weapons Effects Design Parameters	62-83	AFBMD Ex. 62-78
3.11	Personnel		DO
3.12	Maintenance and Logistics		S-133-30-20
3.13	Communications	62-4	DO
3.14	Electrical Power and Distribution	62-77	DO
3.15	Grounding, Shielding, and Electro-Interference	62-75 62-87	DO C755-6120-9157-KS-000
3.16	Reliability		MIL-R-27542
3.17	Operating Life		S-133-30-20
3.18	Security	62-155	DO
3.19	Construction Tolerances	62-88	MIL STD 803
3.20	Finish		
3.21	Cathodic Protection		
3.22	Validation Acceptance Procedures		

TABLE 5.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH CONTROL FACILITY - Continued

TECHNICAL SUBJECT HEADINGS FOR LCF DESIGN CRITERIA (Document D2-30082)		BSD EXHIBIT	OTHER SPECIFICATIONS
PART II - TECHNICAL FACILITY DESIGN CRITERIA			
4.0	Integrated Criteria	62-123	S-133-30-20
4.1	Civil		DO
4.2	Mechanical	62-80, 62-51	DO
4.3	Electrical	62-77, 62-75	
4.4	Communications	62-123	
4.5	Safety		AFM 32-3
4.6	Security		
4.7	Equipment Lists		
5.0	Launch Control Support Building Criteria		
5.1	Function	62-123	S-133-30-20
5.2	Architectural		DO
5.3	Structural	62-83	
5.4	Mechanical	62-51, 62-80	
5.5	Electrical	62-77, 62-75	
5.6	Communications	62-123	
6.0	Access Facility Criteria		
6.1	Function	62-123	S-133-30-20
6.2	Architectural		S-133-30-20
6.3	Structural	62-83	

TABLE 5.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH CONTROL FACILITY - Continued

TECHNICAL SUBJECT HEADINGS FOR LCF DESIGN CRITERIA (Document D2-30082)		BSD EXHIBIT	OTHER SPECIFICATIONS
6.4	Mechanical	62-51, 62-80	
6.5	Electrical	62-77, 62-75	
6.6	Communications	62-123	
7.0	Launch Control Center Criteria		S-133-30-20
7.1	Function	62-123	DO
7.2	Architectural	62-123	
7.3	Structural	62-83	
7.4	Mechanical	62-51, 62-80	
7.5	Electrical	62-77, 62-75	
7.6	Communications	62-123	
8.0	Launch Control Equipment Building Criteria		S-133-30-20
8.1	Function	62-123	DO
8.2	Architectural	62-123	
8.3	Structural	62-83	
8.4	Mechanical	62-51, 62-80	
8.5	Electrical	62-77, 62-75	
8.6	Communications	62-123	

TABLE 5.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI LAUNCH CONTROL FACILITY - Continued

TECHNICAL SUBJECT HEADINGS FOR LCF DESIGN CRITERIA		BSD EXHIBIT	OTHER SPECIFICATIONS
9.0	Antenna Criteria		S-133-30-20
9.1	Function	62-123	
9.2	Architectural	62-123	
9.3	Structural	62-83	
9.4	Mechanical	62-51, 62-80	
9.5	Electrical	62-77, 62-75	
9.6	Communications	62-123	

6.0 STRATEGIC MISSILE SUPPORT BASE

Each SMSB will consist of multiple facilities located within the confines of an existing Air Force Base.

6.1 Wing Effectivity

The requirements herein contained are applicable to the SMSB for each Wing. Deviations necessary to adapt these requirements to selected Air Force Base installations will be included in supplementary design criteria.

6.2 Description

Each SMSB will consist of the following facilities to perform the indicated functions.

6.2.1 Maintenance and Operations Control Facility

This facility will contain the technical staff for the SMSB. It will provide space for directing maintenance and operations.

6.2.2 Electronic Maintenance Facility

This facility will perform field level maintenance on electronic, cryptographic and sensitive electrical equipment associated with the weapon system.

6.2.3 Electrical/Mechanical Maintenance Facility

This facility will perform field level maintenance on all of the electrical and mechanical equipment associated with the weapon system.

6.2.4 Transient Missile Holding Facility

This facility will provide short-term storage from a transporter-erector or a ballistic missile trailer temporarily delayed at the SMSB.

6.2.5 Missile Transfer Facility

This facility will provide the capability of effecting transfer of the missile from the Shipping Storage Container Ballistic Missile (SSCBM) to the transporter-erector or vice versa.

6.2.6 Support Vehicle Maintenance Facility

This facility will provide organizational and field level maintenance for the technical support vehicles. This maintenance will include the cleaning, servicing, adjusting and repairing of weapon system peculiar equipment installed on these vehicles.

6.2.7 Vehicle Dispatch Facility

This facility will provide for the manning and dispatching of all maintenance vehicles to the LF's and LCF's.

6.2.8 Maintenance Crew Ready Facility

This facility will provide space for accommodating maintenance crews for dispatch to perform maintenance.

6.2.9 AFW/Supply/Warehouse

This facility will provide for receiving and storing all Air Force Weapon Account (AFW) spares.

6.2.10 Material Control Facilities

These facilities, one for Electronic and one for Electrical/Mechanical, will provide a central point for:

(a) Dispatching spares, by maintenance vehicle, to the LCF or the LF.

(b) Receiving defective items from the LCF or the LF.

(c) Routing defective items to the proper maintenance facilities for repair.

6.2.11 Unloading Facilities

These facilities will provide for the loading and unloading of transporter-erectors and SSCBM's from railroad cars and SSCBM's from aircraft.

6.2.12 Proof Load Test Facilities

This facility will provide the capability of proof testing the lifting, hoisting and winching devices which are a part of the vehicles or the MGE.

6.2.13 Munitions Facility Complex

This remote facility complex will receive, store, checkout, assemble and maintain Mark IIA and other re-entry vehicles (including warhead). The following facilities are required:

(a) Munitions Facility Building to house personnel, equipment and administrative facilities necessary to receive, handle and checkout re-entry vehicles, warhead, and OGE pyrotechnic components, assemble re-entry vehicles (including warhead), and perform maintenance on malfunctioning re-entry vehicles returned from the launch sites.

6.2.13 (Continued)

(b) Munitions Facility Storage Warehouse to provide an enclosed area for the storage and processing of re-entry vehicle component containers, spare parts, mobile crew equipment, handling equipment and tools.

(c) Munitions Facility Storage Magazine to furnish central storage space for spare warheads and re-entry vehicles complete with their assembly and transport stands.

(d) Munitions Facility Segregated Magazine to store pyrotechnics.

(e) Gate House Security Alarm and Fencing to accomplish the security operations of perimeter patrol and the monitoring of ingress and egress at the Munitions Facility complex.

6.3 Requirements

Weapon-system requirements to be satisfied by the SMSB are contained in the documents listed under Section 2.0. These requirements are tabulated by paragraph reference in Table 6.0-1 (Page 42) for the technical headings of the design criteria document. Key requirements that govern the facility configuration and interfaces are stated below. R

6.3.1 Configuration

The configuration of each of the facilities above described will be based upon the Weapon System Functional Description and System Model Documents. These documents will be developed from Exhibit 62-62. Existing Air Force facilities will be utilized to the maximum practicable extent.

TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA (Documents D2-30083-1&-2)		BSD EXHIBIT	OTHER SPECIFICATIONS	
PART I - GENERAL INFORMATION				
5.0	General Criteria		S-133-30-20 (STL)	R
5.1	Civil		DO	R
5.2	Mechanical Systems	62-51, 62-80		R
5.3	Electrical Systems	62-77, 62-75		R
5.4	Communications Systems	62-123		R
5.5	Safety		AFM 32-3	R
5.6	Security	62-78		R
5.7	Personnel	62-123		R
PART II - MAINTENANCE FACILITIES				
6.0	Electronic Maintenance			R
6.1	Electronic Maintenance Facility Criteria	62-123, 62-83, 62-51, 62-80, 62-77, 62-75	S-133-30-30	R
6.2	Guidance and Control Checkout Facility (Deleted per BSD Direction)	62-83 62-51, 62-80, 62-77, 62-75		R

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TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA (Documents D2-30083-1 & -2)	BSD EXHIBIT	OTHER SPECIFICATIONS
6.3 Encoder/Decoder Facility		S-133-30-30
	62-123	DO
		S-133-30-30
	62-83	
	62-51, 62-80	
	62-77	
6.4 Test Equipment Repair Facility Criteria		S-133-30-30
	62-123	DO
		DO
	62-83	
	62-51, 62-80	
	62-77, 62-75	
6.5 Material Control Facility Criteria		S-133-30-30
	62-123	DO
		DO
	62-83	
	62-51, 62-80	
	62-77, 62-75	

TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA(Documents D2-30083-1&-2)		BSD EXHIBIT	OTHER SPECIFICATIONS	
7.1	Electrical Shop Criteria		S-133-30-30	R
		62-123	DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
7.2	Mechanical Shop Criteria		S-133-30-30	R
		62-123	DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
7.3	Refrigeration Shop Criteria		S-133-30-30	R
		62-123	DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		

TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA (Documents D2-30083-1&-2)		BSD EXHIBIT	OTHER SPECIFICATIONS	
7.4	Communications Maintenance Facility Criteria	62-123		T
		DO		
			S-133-30-30	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
7.5	Support Vehicle Maintenance Facility Criteria	62-72	S-133-30-30	R
		62-123	DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
7.6	Material Control Facility Criteria	62-77, 62-75	S-133-30-30	R
		62-123	DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		

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TABLE 6.0-1

WEAPON SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA(Documents D2-30083-1&-2)		BSD EXHIBIT	OTHER SPECIFICATIONS	R
7.7	Handling Equipment Storage Facility Criteria		S-133-30-30	R
			DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
7.8	Maintenance Crew Dispatch Facility Criteria	62-90	S-133-30-30 AFBM 60-1	R
		62-123		
			S-133-30-30	
		62-83		
		62-51, 62-80		
		62-77, 62-75		
8.0	Maintenance and Operations Control		S-133-30-30	R
			DO	
			DO	
		62-83		
		62-51, 62-80		
		62-77, 62-75		

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TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA(Documents D2-30083-1&-2)	BSD EXHIBIT	OTHER SPECIFICATIONS	
9.0 Proof Load Test Facility		S-133-30-30	R
		DO	
		DO	
	62-83		
	62-51, 62-80		
	62-77, 62-75		
10.0 AFW Supply/Warehouse		S-133-30-30	R
		DO	
		DO	
	62-83		
	62-51, 62-80		
	62-77 62-75		
	62-123		
PART III - MISSILE HANDLING FACILITIES			R
11.0 Transient Missile Holding Facility	62-94, 62-92		R
		S-133-30-30	
	62-149	DO	
	62-83		
	62-51, 62-80		
	62-77, 62-75		

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TABLE 6.0-1

WEAPON-SYSTEM REQUIREMENTS FOR WING VI STRATEGIC MISSILE SUPPORT BASE - Continued

TECHNICAL SUBJECT HEADINGS FOR SMSB DESIGN CRITERIA(Documents D2-30083-1&-2)	BSD EXHIBIT	OTHER SPECIFICATIONS	R
12.0 Missile Transfer Facility	62-92		R
		S-133-30-30	
	62-149	DO	
	62-83		
	62-51, 62-80		
	62-77, 62-75		
13.0 Rail Unloading Facilities	62-94, 62-92		R
		S-133-30-30	
	62-149	DO	
	62-83		
	62-51, 62-80		
	62-77, 62-75		
14.0 Aircraft Unloading Facilities Criteria	62-93 62-94		R
		S-133-30-30	
	62-149	DO	
	62-83		
	62-51, 62-80		
	62-77, 62-75		

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